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tings or specially designed programs for adults in the community. The winner will receive $1,000, plus expenses to attend the NSTA Area Convention in Albuquerque. Entries must be received at NSTA Headquarters by **October 15, 1984.**

The Art of Teaching with Computers Award Program. The Cambridge Development Laboratory (CDL) will be offering two awards. One will recognize teachers who develop innovative lesson plans for teaching laboratory activities using a computer interface. The second award will be given for creative lesson plans using microcomputer software. A prize of a PAL interfacing device for use in the science laboratory, plus expenses (up to $500) for a trip to the 1985 NSTA National Convention in Cincinnati, will be offered for the first award. A $500 gift certificate for use in selecting software from the CDL catalog, plus expenses (up to $500) for a trip to the Cincinnati convention, will be offered for the second. Entries must be received at NSTA Headquarters by **November 14, 1984.**

For more information or for application forms, write to NSTA Awards Program, NSTA Headquarters, 1742 Connecticut Ave., N.W., Washington, DC 20009. Watch for a description of the complete 1985 NSTA Awards Program in the September/October issue of the *Journal.*

Letters

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enormous gap is "mastery teaching," which seems to be an approach to education that requires highly motivated teachers treating individual students in a small class learning environment.

In all justice to Professor Kauffman, the states that hold education in low repute will probably consider the U.S. paradigms that highly value education as even more alien than they do the Japanese paradigm.

For many state governments, talking about being Japanese is far easier than taking the simple, obvious, and expensive steps to improve U.S. education.

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Editorial

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ters, will lead us nowhere unless the approach is drastically changed.

The problem, in other words, is neither in the schools nor among the teachers themselves; it is in our own higher education community. The single most effective thing we could do is give both preservice and inservice teachers courses in science that lead them through the subject matter they are going to teach, so as to insure both their grasp of the subject matter and their capacity for abstract logical reasoning. Furthermore, this should be done by *example*, i.e., the teaching should be conducted in the same manner as we wish them to use in their own classrooms.

Such teaching and retraining would have to be done wherever subject matter is taught, be it in regular subject matter departments or in departments of education. What is being done in colleges and universities at present is generally misplaced in pace, level, and content, and is essentially ineffective. That is why the "old crisis" of the 1950's has not gone away. The situation will not be remedied simply by making preservice and inservice teachers "take more subject matter" as it is now taught in the usual courses. The whole approach must be altered.

The second most important thing that needs to be done is out in the schools beyond our reach. Teachers who are already competent, or who are helped to become so, must be given adequate logistic support so as to be able to make use of one or another of the good, hands-on, inquiry-oriented curricula. It is necessary to engage the minds of the learners, and it is futile to expect children or adolescents to develop meaningful understanding of scientific concepts by being passive listeners and inert receivers of information. Scientific literacy is to be developed through thinking, reasoning, and understanding—not through passive ingestion of esoteric vocabulary.

Once we achieve the absolutely essential steps outlined above, we can resume putting money and effort into writing better curricula.

See you
in September!

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